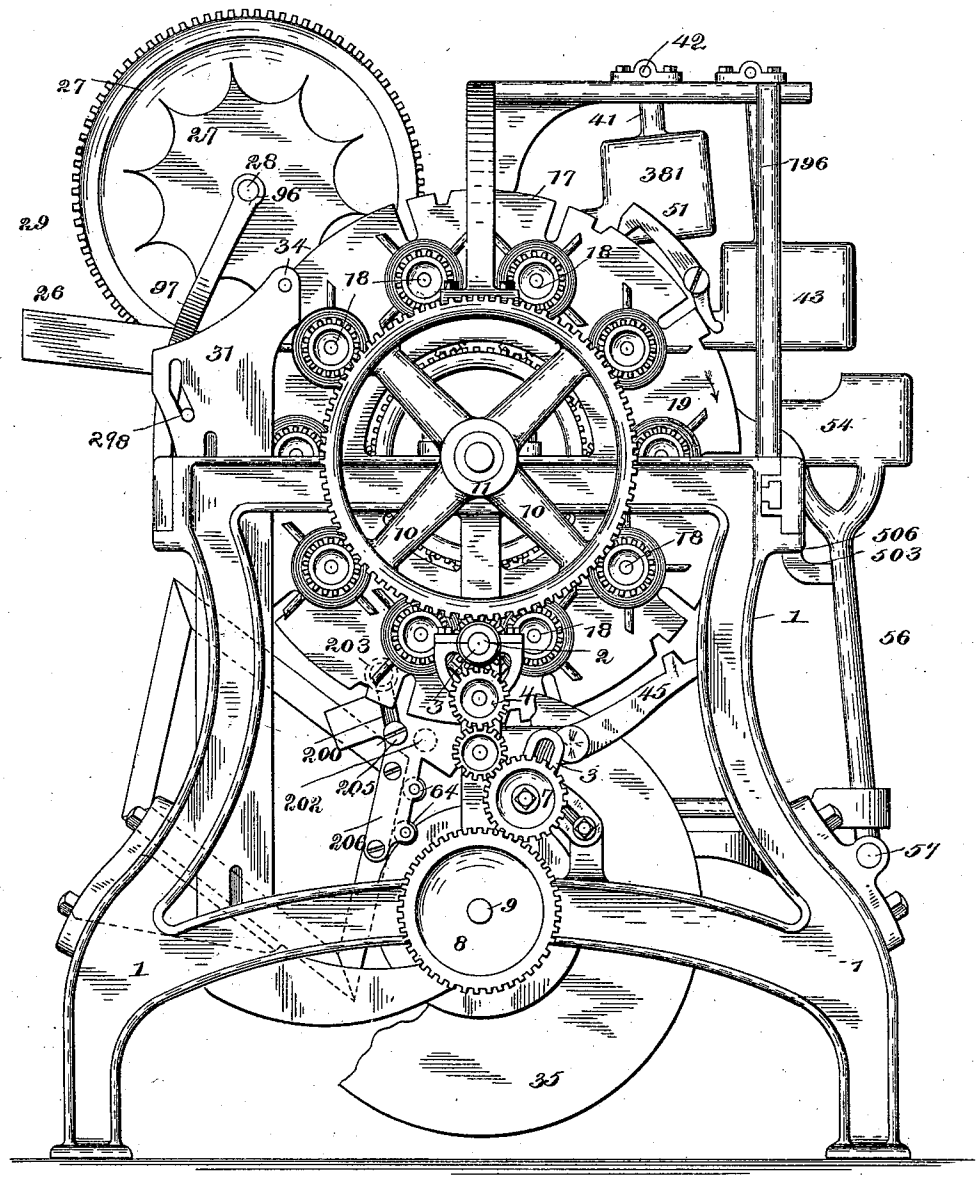
(No Model.) 7 Sheets—Sheet 1.

W. S. SUTTON.

CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

FIG. 1.



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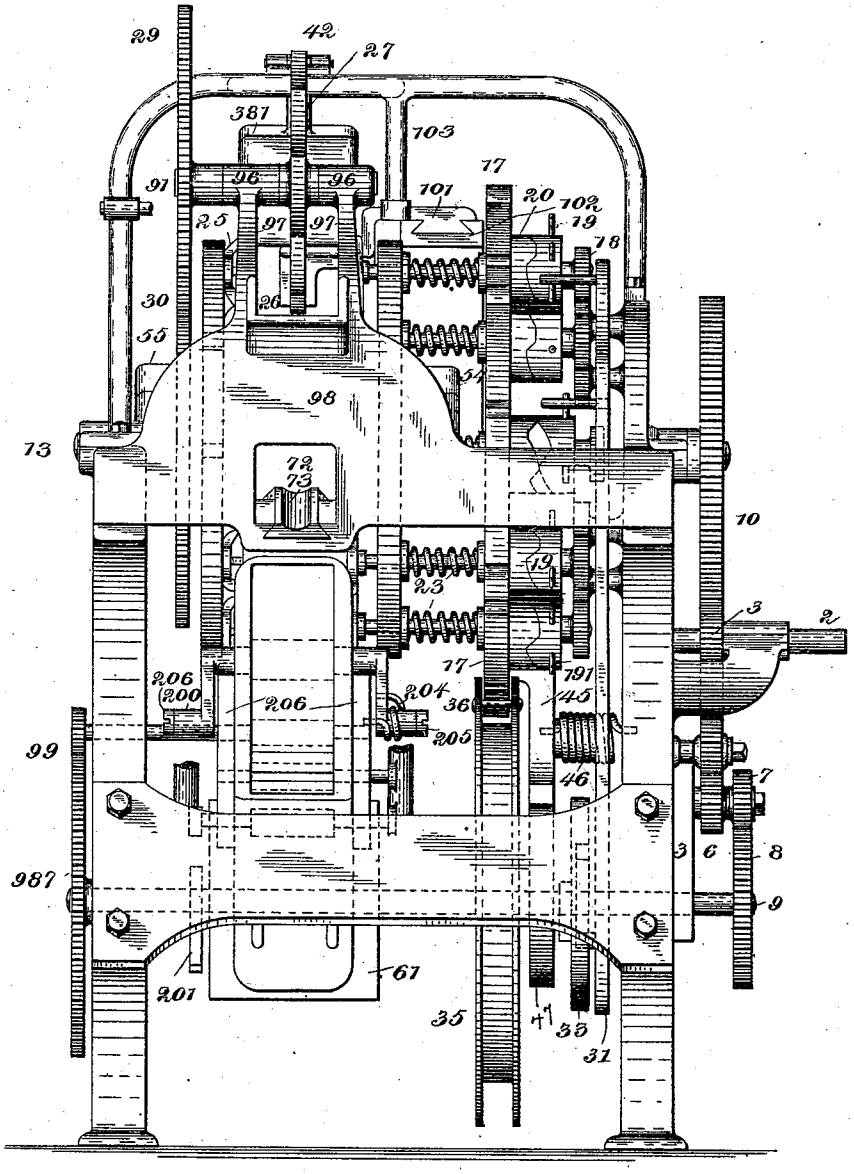
(No Model.) 7 Sheets—Sheet 2.

W. S. SUTTON.

CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

FIG. II.



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(No Model.)

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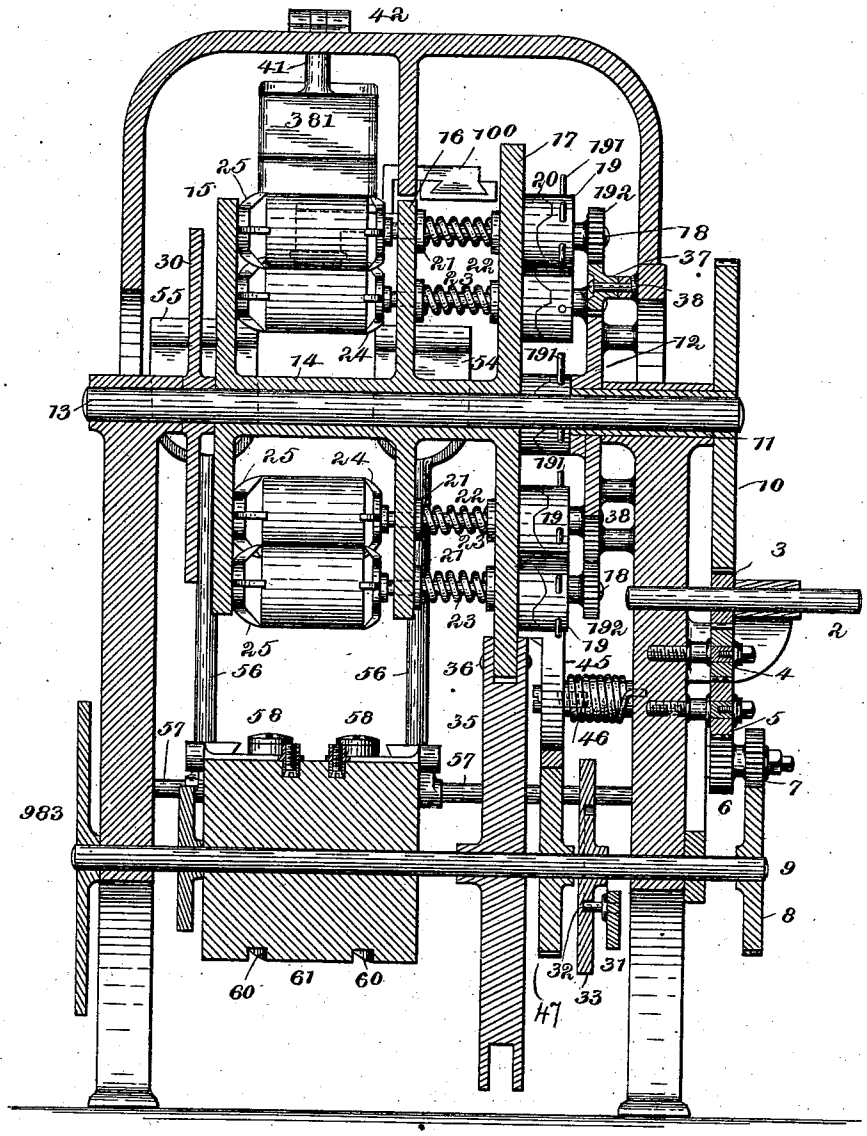
W. S. SUTTON.

CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

FIG. III.



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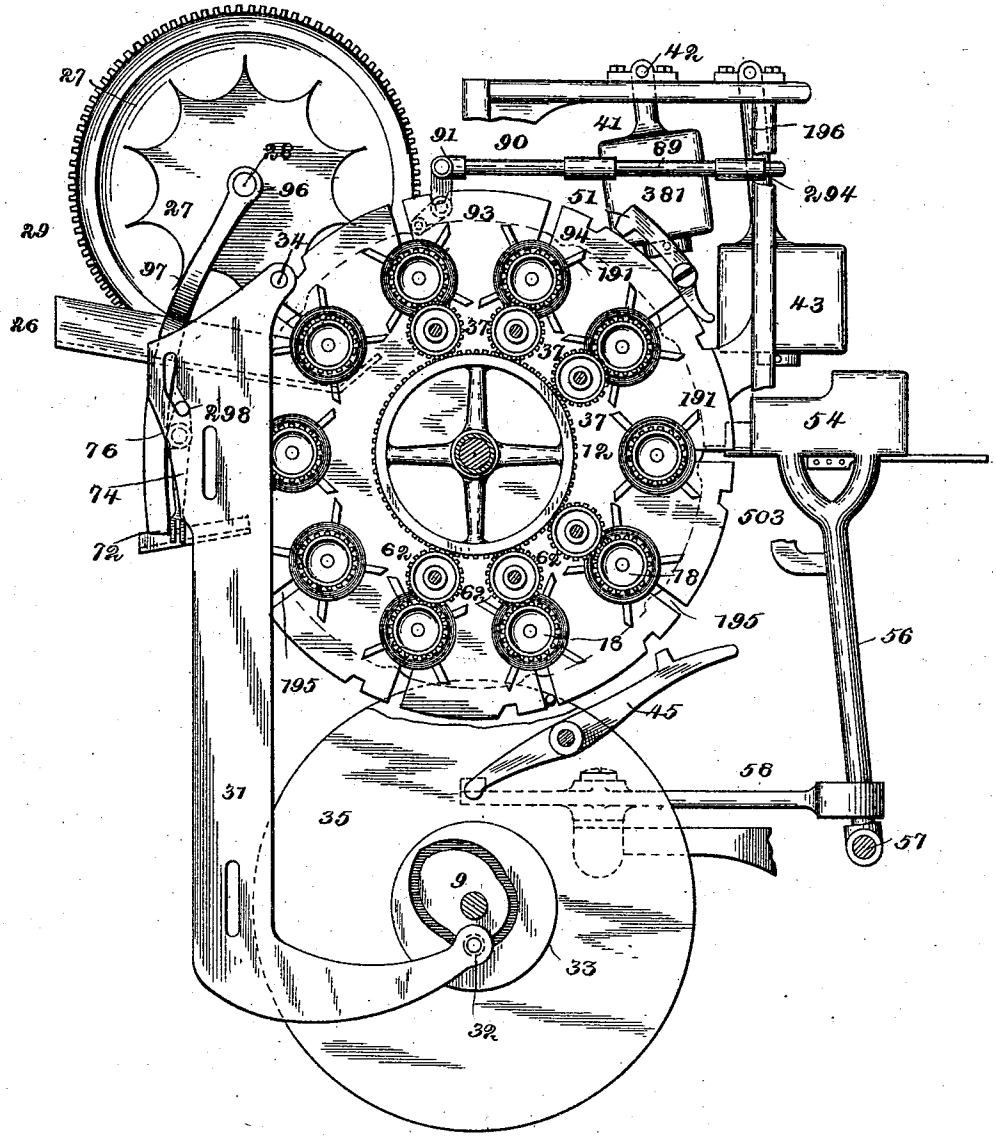
(No Model.) 7 Sheets—Sheet 4.

W. S. SUTTON.

CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

FIG. IV.



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(No Model.) 7 Sheets—Sheet 5.

W. S. SUTTON.

CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

FIG. VI.

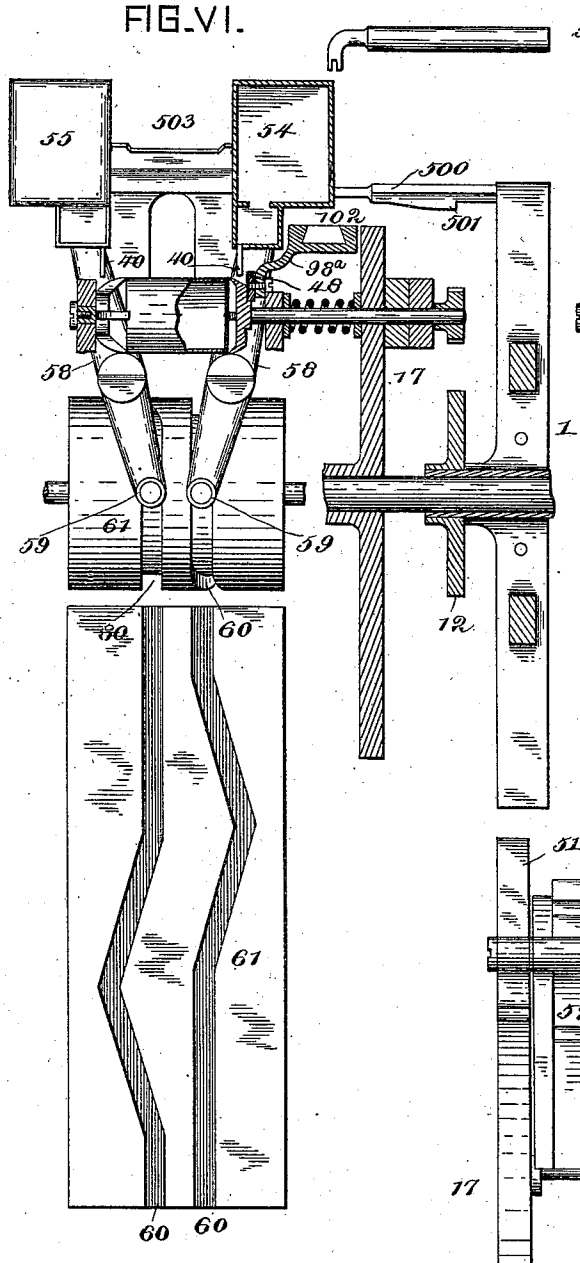


FIG. V.

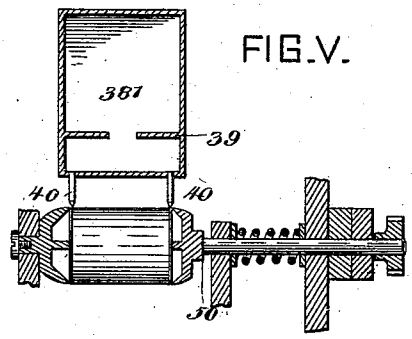
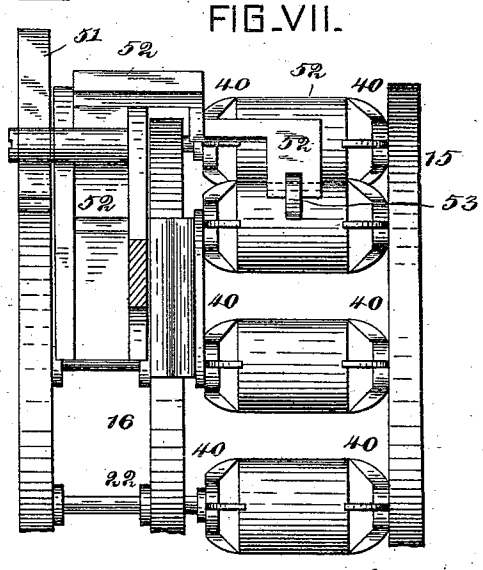


FIG. VII.



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W. S. SUTTON.

CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

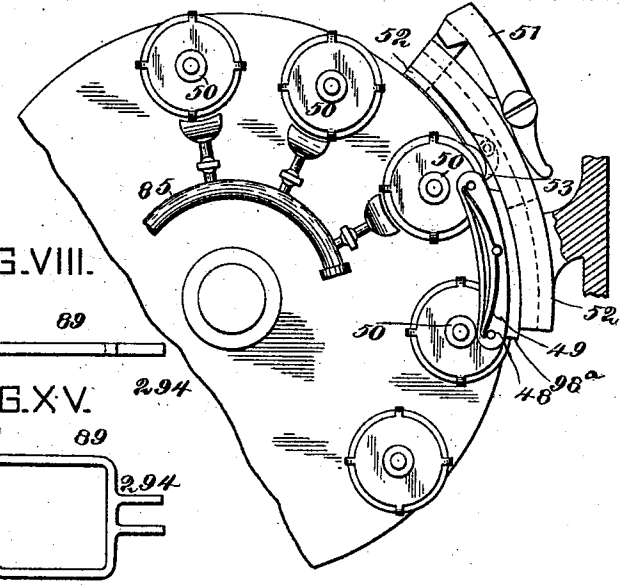


FIG. VIII.

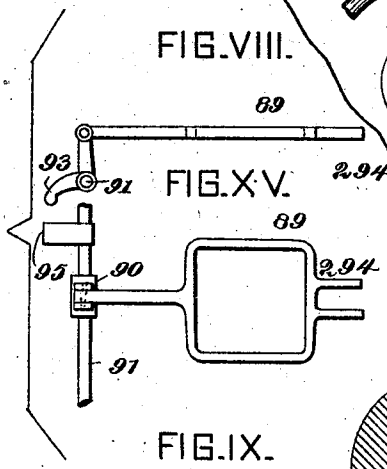


FIG. XV.

FIG. IX.

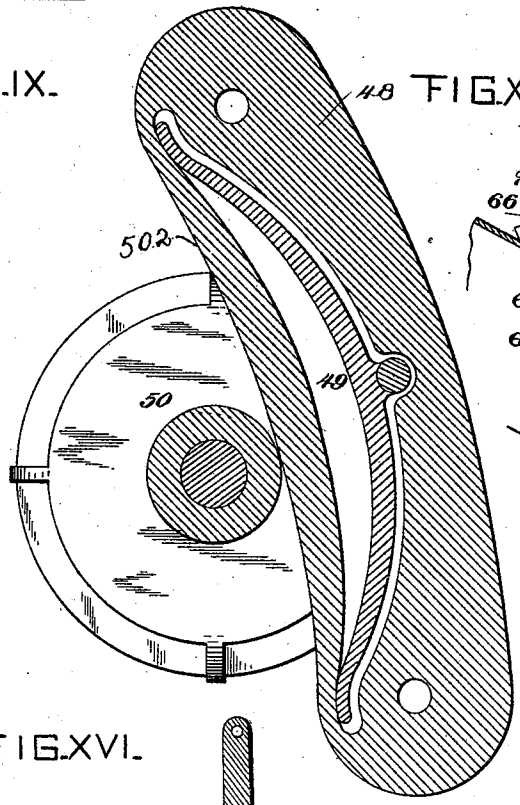


FIG. XVII.

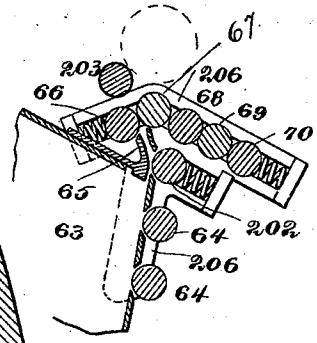
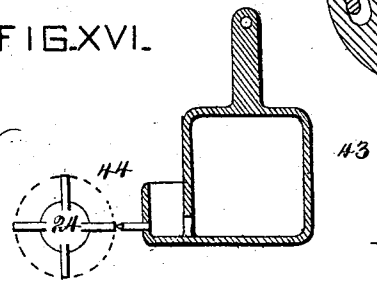


FIG. XVI.



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(No Model.) 7 Sheets—Sheet 7.

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CAN SOLDERING AND LABELING MACHINE.

No. 549,338. Patented Nov. 5, 1895.

FIG. X.

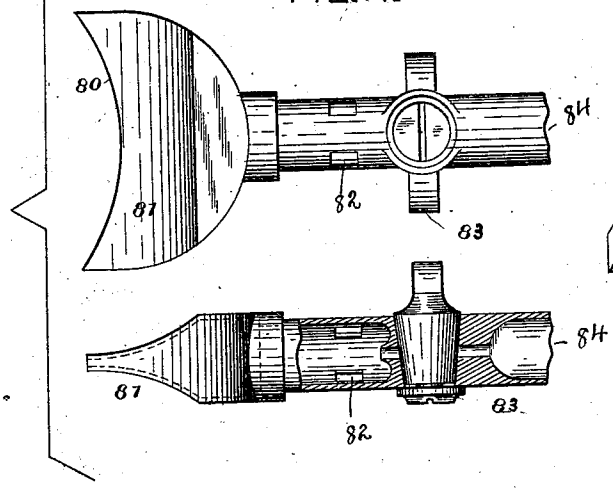


FIG. XI.

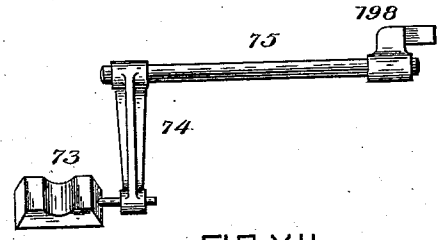


FIG. XII.

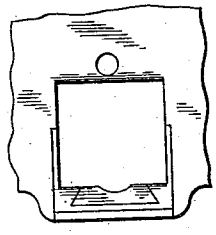


FIG. XIII.

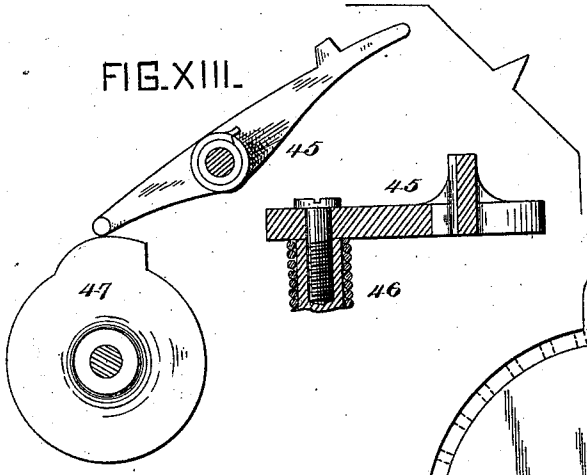
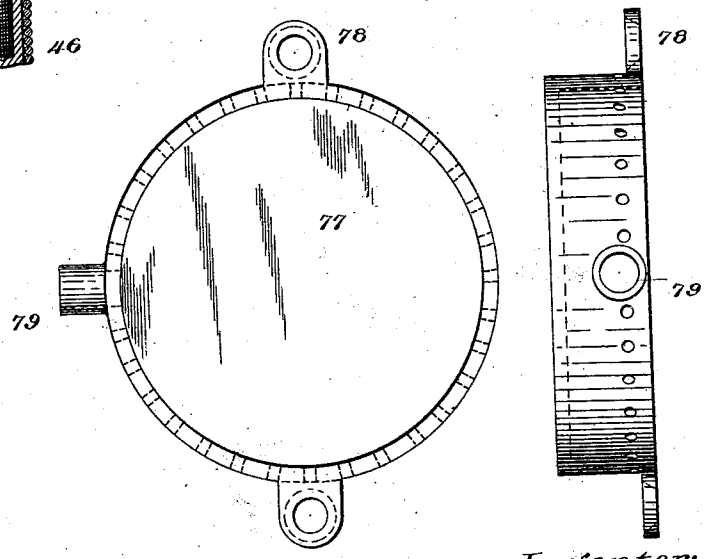


FIG. XIV.



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UNITED STATES PATENT OFFICE.

WILLIAM S. SUTTON, OF ELGIN, ILLINOIS.

CAN SOLDERING AND LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 549,338, dated November 5, 1895.

Application filed January 8, 1891. Serial No. 377,150. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. SUTTON, a citizen of the United States, residing at Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Can Soldering and Labeling Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has for its objects to provide a machine for automatically soldering tin cans and applying the labels thereto at a series of successive steps, as more fully hereinafter set forth.

The above-mentioned objects are attained by the means illustrated in the accompanying drawings, in which—

Figure 1 represents an end elevation of my improved machine complete. Fig. 2 represents a side elevation of the machine. Fig. 3 represents a transverse vertical sectional view thereof. Fig. 4 represents an end elevation of the working parts of the machine detached from the frame, but in their proper relative positions. Fig. 5 represents a detached detail view of one of the chucks, a can confined between the chucks, and the soldering device for applying the solder to the end seams of the can, said soldering being shown in horizontal section. Fig. 6 represents a detached view in detail of the mechanism for applying the flux and solder to the longitudinal seam of the can. Fig. 7 represents a plan of the mechanism for adjusting the longitudinal seam to the proper position to be acted upon by the flux and solder pots and the bar for holding the can in position. Fig. 8 represents a detached view in detail showing the devices for heating the the can. Fig. 9 represents an enlarged detached detail view in section of the devices for reversing the movement of the can and holding it in its adjusted position. Fig. 10 represents two detail views of one of the burners for heating the cans. Fig. 11 represents a detached detail view of a portion of the mechanism whereby the finished can is finally discharged from the machine. Fig. 12 represents an elevation of a portion of the discharge mechanism and hole through which the gas-pipe enters to supply the burners. Fig. 13 represents detached detail views of the mechanism for temporarily releasing and arresting the movement of the mechanism carrying the chucks while the different operations are performed. Fig. 14 represents enlarged detached views of a burner for heating the flux and solder pots of the machine. Fig. 15 represents a detached view of the mechanism for withdrawing the flux and solder pots from one can while a succeeding can is being moved into position. Fig. 16 is a detached detail view of one of the solder-pots and the part of the chuck in which the can is held by the other half of the chuck. Fig. 17 is a detail view in side elevation of the mechanism for applying the labels to the cans.

The numeral 1 indicates the frame of the machine, in which the various working parts are supported.

2 indicates the main or driving shaft of the machine, which is journaled in suitable bearings at one side of the frame. The said shaft has secured upon it a pinion 3, which intermeshes with the upper pinion of a train of gearing 4, 5, and 6, the latter pinion intermeshing with a gear-wheel 8, mounted on the end of a shaft 9, journaled in suitable bearings in the frame 1. The pinion 3 also intermeshes with a gear-wheel 10, mounted on a sleeve 11, journaled in a bearing in the frame 1. The inner end of said sleeve has mounted on it a gear-wheel 12, for the purpose hereinafter explained.

The numeral 13 indicates a shaft, which has its journal bearing at one end in the sleeve 11 above mentioned and at the other end in the frame 1. Upon the said shaft is mounted a sleeve 14, which is provided with three disks, 15, 16, and 17.

The numeral 18 indicates a series of spindles, which have bearings on the disks 16 and 17. The said spindles at their forward ends have mounted upon them the fixed cam-disks 19, which bear against similar cam-disks 20, secured to the outer face of the disk 17, for the purpose hereinafter explained. The spindles are provided with collars 21 and the disk 17 with collars 22, between which are located the spiral springs 23, which keep the spindles pressed normally inward or toward the disk 15. The inner ends of said spindles

are provided with one element of the chucks to seize and hold the cans as they are fed to the machine. The disk 15 is provided with the other element 25 of the same chucks, which elements are journaled therein, the chucks in each case being composed of a series of fingers located so as to tightly grasp the heads of the cans with as little surface-contact as possible, in order to prevent the heating of the working parts of the machine by the absorption of heat from the heated cans during the work of soldering.

At the front of the machine is located a chute 26, of a width equal to the length of the cans, and in said chute is arranged to rotate a fluted feed-roller 27, which is mounted on a shaft 28, having cog driving-wheel 29, gearing with and driven by a pinion 30, mounted on the shaft 13 before mentioned. The said shaft 28 is journaled in bearings 96 at the upper ends of the standards 97, extending upwardly and being a part of the front plate 98 of the frame1, through which the reception and delivery chutes pass.

The numeral 31 indicates a vertically-reciprocating bar, which is arranged to move in guideways in one side of the frame 1 and which is operated by means of a pin 32 at its lower end, which projects into a cam-groove in a disk 33, mounted on the shaft 9 before mentioned. The said bar at its upper end is provided with a pin 34, which projects at a right angle to the bar and works in the path of the pins 191 on the peripheries of the cams 19, secured to the spindles, so as to move the same outward to permit the cans to enter between the chucks and be seized thereby at the proper time as they are fed into the machine. The disk 17 at its periphery is provided with a series of equidistant slots 195 and works in a groove in the periphery of a disk 35, mounted on the shaft 9. The groove in the said disk is provided with a pin 36, which at the proper time engages one of the slots in the periphery of the disk 17 and carries the cans forward in the direction of the arrows to the different positions required in the various operations of the machine.

The numeral 37 indicates a series of pinions, which are mounted and turn on studs 38, secured to the frame 1, the said pinions intergearing with the teeth of the wheel 12 and also with the gears 192 on the ends of the spindles 18, so as to intergear with the same as the disk 17 is rotated and turn the spindles and the chucked cans to present the end seams to the action of the flux and solder of the first fluxing and soldering devices.

The fluxing device consists of a closed pot or receptacle 381, constructed of metal or other suitable material, having a partition 39 with a central opening, and its forward part of the smaller chamber being open and provided with tubes or ducts 40, which extend over the line of travel of the head-seams of the cans, so as to deliver the flux to the same as the cans pass under them. The said flux-pot is suspended by a hanger to a rock-shaft 42 at the top of the frame of the machine, so that the delivery tubes or ducts 40 will set properly in line with the cans as they are carried forward by the chucks.

The soldering device for applying the solder to the end seams of the can (indicated by the numeral 43) is similar in construction to the flux-pot before mentioned and is suspended from the upper part of the frame of the machine in a similar manner by a hanger 196. The said soldering-pot is provided with tubes or ducts 44, which extend over the path traversed by the joints at the ends of the cans, so as to deliver the solder to the same when they have stopped in the proper position.

To the frame of the machine is fulcrumed a stop lever or pawl 45, which is kept normally pressed to the periphery of the disk 17 by means of a spring 46, which sets around the fulcrum-pin of the lever and has a bearing at one end in said lever and at the other end in the frame 1. One end of the said lever bears against the periphery of a cam-disk 47, mounted on the shaft 9, and the other end is provided with a detent, which is adapted to enter one of a series of recesses in the periphery of the disk 17 to hold the same temporarily while the different operations are performed.

The numeral 48 indicates a friction-bar having a yielding bearing-surface 502, which is pressed by a suitable spring 49 against the periphery of a collar 50, mounted on the chuck-spindle. This bar is secured to a bracket 98ª, attached to the female slide 102, and causes the spindles, chucks, and cans to be moved in a reversed direction. The said friction-bar reverses the motion of the can until the pawl 53 drops into the longitudinal seam of the can and arrests the further revolution of the same, as it will then be in proper position to be acted upon by the flux and solder pots. The collar 50 slips along on the bar the rest of the distance and remains pressed against it while the can is being longitudinally fluxed and soldered, the pawl 53 and slide 52 returning to their normal positions as the flux-pot 55 starts across by the lug on the under side of the pot, drawing the slide 500, Fig. 6, with cam 501, which strikes against the lower end of the pawl 51, releasing it from the recess in the disk 17, which has drawn it to the position in order that the longitudinal seam may be maintained in the position in which it must be fluxed and soldered.

It is evident that as both the pawl 51 and detent 53 are journaled to the same slide, when the pawl 51 is thrown out of the disk 17 both pawls and slide will be immediately drawn back up the female slide out of the

way of the flux and solder pots. This slide may be provided with a counterweight or spring to return it to its normal position.

The numeral 51 indicates a pawl fulcrumed to a slide 52, which engages in one of the recesses in the periphery of the disk 17, causing the said pawl 51, concentric slide 52, and long arm and detent 53 to rotate with it, so that the longitudinal seam of the can may be adjusted to the proper position to be acted upon by the flux and solder pots, said slide and pawl returning to their normal position, as before described. The said slide 52 travels in a concentric slide 102, which is attached to the frame of the machine, as shown in part section in Figs. 7 and 8 of the drawings.

The numerals 54 and 55 indicate the flux and solder pots, respectively. For applying flux and solder to the longitudinal seam these pots are mounted on the uprights 56, arranged to travel on a bar 57, secured to the lower part of the frame of the machine and operated by means of levers 58, fulcrumed to the frame of the machine and having at one end of each a pin, on which is a roller 59, working in cam-grooves 60 in the periphery of a cam-wheel 61, whereby the said flux and solder pots are caused to traverse successively the longitudinal seam of the can to apply the flux and solder thereto.

The numeral 503 indicates a curved metallic plate or bar depending from an offset 506 of the frame 1, the lower portion of said plate or bar extending laterally therefrom, as particularly shown in Fig. 1 of the drawings. The free edge of the plate is recessed between its ends, as shown in Fig. 6. The uprights 56, carrying the flux and soldering pots, are inclined slightly and rest against the recessed edge of the plate or bar, so that in traveling across it the flux and solder ducts will traverse the longitudinal seam of the can and will be moved away from the same when each end of the plate is reached.

The numerals 62 indicate three gear-pinoins, intergearing with the cog-wheel 12 and so disposed as to be in the path of the cog-pinions on the chuck-spindles 18 above mentioned, and to intergear with the same as the disk 17 is rotated. These serve to turn the chucks and the cans after the final soldering operation in the direction in which they were started and to cool them prior to the application of the labels.

The label-applying device consists of a box or receptacle 63, in which the labels are placed in such position as to rest against the front side thereof, which has transverse openings, into which work the peripheries of the feed-rollers 64. The box is provided with a throat 65, through which the labels are passed singly by the feed-rollers, the said throat extending upward and to two rollers 66 and 67, which apply the paste and carry the label upward.

The numerals 68 69 70 indicate a series of rollers journaled in the upper part of the box, by means of which the paste is evenly distributed and applied to the paste-roller, which applies paste to the labels. The box is located in the lower part of the frame of the machine, and near the front thereof, as shown in Fig. 1 of the drawings, and the rollers receive their motion through the medium of the intergearing cog-wheels 987 and 99, Fig. 2 of the drawings, and the label is pressed against the periphery of the can by means of a roller 203, mounted upon a rock-shaft 200.

The numeral 72 indicates the discharge-chute of the machine. This is located at the front of the machine, just below the entrance-chute for the cans. The said chute consists of a suitable trough, having arranged at its bottom a slide 73, Figs. 11 and 12. The said slide has connected to it one end of a lever-arm 74, secured to a rock-shaft 75, journaled in bearings 76, secured to the front plate of the frame 1, and provided with a lateral lever arm or pin 298, setting into a cam-slot in the reciprocating bar 31, by which it is operated to move the slide. This movement is necessary at the proper time, as each can has to pass the point at which the slide is located, and the inner end of the slide during the passage of the can should be out of the way of the same, but immediately after such passage should be directly under it to receive it as it drops from the chuck and allow it to roll out of the machine. The slide is grooved longitudinally in order to form guideways for the ends of the can, so that the same may pass truly through the exit-chute.

The numeral 77 indicates one of the heaters, by means of which the flux-pots and the solder-pots of the machine are heated. These heaters consist of shallow cylindrical chambers and are provided with lugs 78, by means of which they may be secured to the bottoms of the same. The said chambers are provided with apertures through the peripheries to admit of the escape and combustion of the gas or other fuel, in order to heat the flux and solder pots, and at one side with an induction-pipe 79 for gas or vapor.

To provide for heating the cans a series of burners 80 are employed, which are formed with flattened nozzles having segmental openings conforming to the contour of the peripheries of the cans. The said burners have tubular bodies provided with air-admission openings 82, with regulating-valves 83, and induction-openings 84 for the admission of gas for heating the same. The said burners are connected with a segmental pipe 85, secured to the frame of the machine, as shown in Fig. 8 of the drawings, so as to be in the line of travel of the cans and heat the same as they travel to the fluxing and soldering devices.

The solder-pots in the present instance are divided into two compartments, as before mentioned, and the delivery-tubes are ar-

ranged to come in direct contact into the seams of the cans, so as to apply the solder by capillary attraction and gravitation alone without the use of mechanical devices for the purpose. When the fluxed seam or seams come into contact with the delivery-tubes of the soldering-pots, the flow of the solder is started by the capillary attraction established and is continued both by capillary attraction and by the gravitation of the molten solder so long as the seams of each can are in contact therewith, thus applying the solder thereto without the aid of mechanical devices. When the solder in the smaller chamber of the soldering-pot has become nearly exhausted, the solder will flow in from the upper chamber to recharge the lower chamber, and this will occur successively until the upper chamber of the solder-pot is exhausted, after which it will have to be refilled. The lower chamber thus operates to maintain a limited "head" or pressure on the tubes.

The lower side of the flux-pot has a lug, which enters a recess in the bent end of a slide 500, on which is a cam 501, which releases the pawl from the disk 17 and allows the slide and with it the pawls to be returned to their normal positions, which may be accomplished by suitable springs.

The numeral 89 indicates a reciprocating rectangular frame embracing the first flux-pot and which is connected at its forward end with an arm 90 on a rock-shaft 91, journaled in bearings in the frame 1. The said rock-shaft is provided with a trip-lever 93, which is operated by means of a series of cam-recesses 94 at the periphery of the disk 15, as shown in dotted lines in Fig. 4 of the drawings. The rear end of the slide 89 is bifurcated, as indicated by the numerals 294, and the members embrace the hanger 196, which supports the solder-pot 43, so that the flux and solder pots will be forced out of the way until a can is passed into position.

The operation of my improved machine is as follows: The cans, with the heads properly fitted on, are fed into the machine through the feed-chute by means of the fluted feed-disk and are then caught between the chucks, which work in unison with the other moving parts of the machine. As each can passes between the chucks the chucks are closed upon the same by the action of the pin upon the vertically-reciprocating bar, which engages one of the pins on the cam of the spindle of the chuck which has received the can, closing and locking the same between the chuck on the spindle and the chuck on the opposite disk. The pin in the periphery of the grooved wheel 35 then engages one of the slots in the disk 17, carrying the disks with the can that has been fed, the pawl locking the same disk 17 until again actuated by the pin in the periphery of the grooved wheel. The can after it is carried forward is caused to revolve by means of the gear-wheels until it has been passed under the first flux and solder pots and has had its end seams soldered, the can being heated by the burners during its passage. The pin in the periphery of the grooved roller at the time of feeding the next succeeding can advances the disk one step, when the flux is applied from the flux-pot to the end seams of the can first fed in. When the next succeeding can is fed in, the disk 17 is again advanced as before, and the first-mentioned can passes under the first soldering device, by which the solder is applied to its end seams. Upon the next advance of the disk 17 the pinion on the advance spindle clears the cog-wheels and the spindle remains stationary until the bearing-bar engages its collar. As the said collar on each spindle comes in contact with the yielding bearing-surface 502 during the travel of the cam-disk 17, the cogs on the gear-wheel secured to the spindles having passed out of gear with the wheels 18, the frictional contact causes the cams to revolve in a reverse direction, reversing its movement until the pawl 53 engages in the longitudinal seam of the can, as above described. After the pawl is released the flux and solder pots are traversed along its side and the longitudinal joint soldered. The can is then carried forward, the cog-gears operating the spindles to again reverse the motion of the can, which is carried over the labeling devices, whereby the label is applied. The sector on the shaft 9 (indicated by the numeral 201) has the same number of teeth as the pinion on the roll 64, causing it to make one revolution, which starts the label up, so that it passes between the throat-plate and the roll 202, which receives motion, causing the label to continue its upward course over the paste-roll 67, after which it is applied to the can by pressure applied by the roll 203, which is operated by the rock-shaft 200 and its spring 204 to press the label with a yielding force against the periphery of the can. The can on the further movement of the machine is carried to the delivery-chute, the cam on the movable spindle carrying the chuck being operated by the pin 95 on the vertically-reciprocating bar to release the can and drop it into the delivery-chute, through which it is discharged by the slide working therein.

By means of my improved machine any one or more of the operations may be performed independently of the rest. Thus if it is desired to flux and solder the end seams the body seaming and labeling devices may be removed or disconnected, or the end-seaming devices may be removed and the body seaming devices used alone or in connection with either one of the others. Thus if the body-seaming device is not used the following parts will be inactive, viz: the flux and solder pots 54 and 55, uprights 56, lever-shaft 57, levers 58, cam 61, slide 52, pawl 51, detent 53, friction-bar 48, and the female

slide and bracket attached to the frame of the machine.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a machine for soldering and labeling tin cans, the combination with the feed chute, the feed wheel and its operating mechanism of the sleeve carrying three disks and mounted upon a transverse shaft journaled in suitable bearings, the longitudinally movable spindles having chucks at their inner ends, the opposing chucks journaled in one of the disks, and mechanism for actuating the spindles as the cans are fed between the chucks, to seize and carry the same forward, substantially as specified.

2. In a machine for soldering and labeling tin cans, the combination with the movable chuck spindles, and the cams secured to one of the disks in which said spindles have their bearings, of the cams secured to the said spindles and having radial pins on their peripheries, and the vertically movable bar having a pin at its upper end and the mechanism whereby said bar is operated, to move the spindles and chuck the cans and release them, substantially as set forth.

3. In a machine for soldering and labeling tin cans the combination with the disks with sleeve and the three disks carried thereby, of the movable spindles and chucks, on said spindles, the pinions mounted on studs secured to the frame of the machine and the spur wheel intergearing with the pinions on the said chuck spindles, whereby the same are operated to rotate the cans, during the application of the flux and solder to the end seams thereof, and the application of the labels thereto substantially as specified.

4. In a machine for soldering and labeling tin cans the combination with sleeve and the disks mounted thereon, of the disk having a groove in its periphery, into which the driving disk on the sleeve works, and the pin in the groove in said disk adapted to engage successively a series of slots in the driving disk to advance the same intermittently and carry the cans substantially as specified.

5. In a machine for soldering and labeling tin cans, the combination with the sleeve and disks mounted thereon, and carrying the chuck spindles, of the detent lever, and cam which actuates the same, whereby the driving disk is released and the movement of it is temporarily arrested, substantially as and for the purposes specified.

6. In a machine for soldering and labeling tin cans the combination with the sleeve, and the disks mounted thereon, of the detent pawl, the pawl arranged to drop into the space between the longitudinal overlapped edges of the can, to arrest the motion of the same prior to the application of the flux and solder thereto substantially as specified.

7. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve and disks and the movable chuck spindles having collars near the edge of the spring actuated bearing bar, secured to the frame of the machine and adapted to bear against the collars temporarily whereby the motion of the chucks and cans is reversed substantially as and for the purposes set forth.

8. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve, the disks mounted thereon and the movable chuck spindles and their pinions, of the flux and solder pots, and tubes for delivering the flux and solder to the longitudinal seams of the cans and the levers and cam whereby the said pots are traversed along the longitudinal seams of the cans, substantially as specified.

9. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve, the disks mounted thereon and the movable chuck spindles and their pinions, of the pinions mounted on studs secured to the frame of the machine and adapted to engage the pinions on the spindles to rotate the same and the cans in the original direction after having the longitudinal seams soldered in order to cool the cans after the final soldering, substantially as specified.

10. In a machine for soldering and labeling tin cans the combination with the rotating sleeve, the disks mounted thereon and the movable chuck spindles and cams having radial pins, of the lower pin on the vertically reciprocating bar whereby the cams are turned to separate the chucks and discharge the cans, substantially as specified.

11. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve and the disks mounted thereon and the chucks and movable chuck spindles of the discharge chute, of the slide located and adapted to move thereon, the lever fulcrumed to the frame of the machine and the pin projecting from said lever into a cam slot, in the vertically reciprocating bar whereby the slide is operated to discharge the soldered and labeled can from the machine substantially as specified.

12. In a machine for soldering and labeling tin cans, the combination with the chuck carrying disk, of a series of burners, connected with a gas supply pipe secured to the frame of the machine, the said burners being arranged radially to the shaft of the disk and having contracted segmental openings lying in the path of the traversing cans, whereby the same are heated on their passage to the flux applying and soldering devices, substantially as specified.

13. In a machine for soldering and labeling tin cans, the combination with the main driving shaft and the pinion thereon of the train of gearing, the lower shaft having a gear wheel intermeshing therewith, the cam disk mounted thereon and the vertically reciprocating bar, actuated by the said disk and provided

with pins to actuate the chuck spindles, to seize and release the cans at the proper periods, substantially as specified.

14. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve carrying a series of three disks, of the chuck spindles, having collars thereon and mounted in bearings in two of the disks, the spiral springs whereby the spindles are pressed normally inward, the cams mounted on the outer face of the outer disk, 17, the adjacent cams mounted on the spindles, and mechanism for operating said cams to permit the springs to close chucks on the movable spindles, substantially as specified.

15. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve carrying a series of three disks mounted in bearings in two of the disks, the spiral springs whereby the spindles are pressed normally inward, the cams mounted on the outer face of the outer disk, the adjacent cams mounted on the spindles and mechanism for drawing the spindles backward against the pressure of the springs, to release the cans substantially as specified.

16. In a machine for soldering and labeling tin cans, the combination with the rotating sleeve, the movable spindles and chucks, and the chuck disk of the end seaming flux pot and solder pot, the reciprocating slide, and rock shaft, and the trip lever secured to said rock shaft and operated by a series of cam recesses in the chuck disk, to move the said pots to and from the cans, substantially as specified.

17. In a machine for soldering and labeling tin cans, the combination with the sleeve and disks mounted thereon, of the chuck spindles and the cog pinions, the pinions which impart the initial movement thereto, the fluxing and soldering devices for soldering the end seams, the arresting mechanism and devices for applying the flux and solder to the longitudinal seams, and the mechanism for restoring the original motion to the chuck spindles and the label applying devices, arranged to operate substantially in the manner specified.

18. In a machine for soldering and labeling tin cans the combination with the rotating sleeve, the disk carrying the chucks and the chuck spindles, the cog pinions mounted on said spindles and the feed chute and feed wheel, and mechanism for operating the same, of the gear wheels for initially rotating the cans, the devices for fluxing and soldering the end seams, the mechanism for reversing and arresting the motion of the can, and applying the flux and solder to the longitudinal seams of the can, and the mechanism for restoring the motion to the cans and the labeling devices substantially as specified.

19. In a machine for soldering and labeling tin cans, the combination of the feed chute and feed wheel, the disks carrying the chucks and chuck spindles, the mechanism for rotating the cans initially and applying the flux and solder to the end seams, the mechanism for reversing and arresting the motion of the cans and applying the flux and solder to the longitudinal seams thereof, the mechanism for restoring the motion to the cans and applying the labels thereto and the mechanism for releasing the cans from the chucks and discharging said cans substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM S. SUTTON.

Witnesses:
D. F. BARCLAY,
E. B. MARION.